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Introduction

Thank You for purchasing the Belkin 4-Port Cable/DSL Gateway Router. In minutes you will be able to network your computers together and share your Internet connection. The following is a list of features that make your new Router an ideal solution for your home or small office.

Key Features:

NAT Firewall Security

Your Belkin 4-Port Cable/DSL Gateway Router employs Network Address Translation (NAT) to protect your network from the outside world by isolating it from the Internet. NAT monitors all of the data coming in from the Internet and will only let through the information you want.

Integrated 10/100 4-Port Switch

The Belkin 4-Port Cable/DSL Gateway Router has a built-in 4-Port network switch to allow your computers to share printers, data and MP3 files, digital photos, and much more. The switch features automatic detection so it will adjust to the speed of connected devices. The switch will transfer data between computers and the Internet simultaneously without interrupting or consuming resources.

Built-in DHCP

Dynamic Host Configuration Protocol (DHCP) on-board makes for the easiest possible connection of a network. The DHCP server will assign IP addresses to each computer automatically so there is no need for a complicated networking setup.

Introduction

Web-Based User Interface

Setting up the Router's functions is done through your web browser. You can do this easily without having to install additional software onto the computer. There are no disks to install or keep track of and, best of all, you can make changes and perform setup functions from any computer on the network quickly and easily

Package Contents

- Belkin 4-Port Cable/DSL Gateway Router
- Power Supply
- Belkin SOHO Networking Software CD
- User Manual

System Requirements

- Broadband Internet connection such as a Cable or DSL modem with RJ45 (Ethernet) connection
- At least one PC with an installed network interface card (NIC) or alternative (USB Ethernet adapter or PCMCIA/CardBus card for laptops)
- TCP/IP networking protocol installed on each computer
- High-quality networking cable*
- Microsoft Internet Explorer 4.0 or later, or Netscape Navigator 4.0 or later

We recommend top quality Belkin CAT6 Networking Cables, part number A3L980-XX-S

Product Descriptions

F5D5230-4 4-Port Cable/DSL Gateway Router





Product Descriptions

Front Panel

Power LED–When lit, this light indicates that the unit is receiving power

WAN Link Status

- GREEN indicates that there is an active connection with the Cable or DSL modem. If this light is off, the link is not established.
- FLASHING GREEN When the WAN link status light is flashing green, data is flowing between the Router and the Cable or DSL modem.

Port Activity/Status Lights

- AMBER-Solid amber indicates that there is a 100Mbps (100Base-TX) link between the Router and the computer connected to that port.
- GREEN-Solid green indicates that there is a 10Mbps (10Base-TX) link between the Router and the computer connected to that port.
- FLASHING–When a port status light is flashing either amber or green, data is flowing between the Router and the computer connected to that port.

Rear Panel

Power Input Jack–Connect the DC power supply

WAN Port–Connect the network cable from the Cable or DSL modem to the WAN port

LAN Ports–Numbered 1 – 4. Connect the network cable from your PCs to these ports. Note: they do not need to be connected sequentially. For example, in a two-computer network you can connect one computer to Port 4 and another to Port 1.

Reset Button–If the Router stops functioning properly, you can power off and on the Router, without losing your settings. Press and hold the RESET button for 2 seconds. The power light will begin blinking and the port lights may blink. When the lights stop blinking, the Gateway Router has been reset.

Belkin Docking Options

The Belkin Docking Ring

Belkin has designed the Router to link together with other Belkin networking products through the unique docking ring on the side of module. It will fit into the mating ring of another Belkin network product such as the 5- or 8-Port Switch. Simply place the modules side by side and push them together.

Wall Mounting the Belkin Gateway Router

Belkin provides an adapter that will allow the unit to be mounted to the wall. The adapter is available at <u>belkin.com</u>. To install the wall mount follow these steps.

- 1. Use the wall mount as a template and mark the screw holes on your wall with a pencil.
- 2. Drill holes in the wall and insert screw anchors (not included) into the wall.
- 3. Insert screws into the anchors and turn them in just far enough so when the wall mount is placed on the screws that it is snug but still able to slide.
- 4. Snap the wall mount into the docking ring on the Router.
- 5. Line up the wall mount's holes with the screw heads and push the wall mount over them. Slide the Router and wall mount down over the screw heads to secure it to the wall.



Sharing Your Internet Connection Is Done In 4 Easy Steps

- Step 1: Obtain information about your Internet Service Provider (ISP) and your network
- Step 2: Connect your computers to the Belkin 4-Port Cable/DSL Gateway Router (the Router)
- Step 3: Set up your computers for networking
- Step 4: Configure the Router

STEP 1: Obtain information about your Internet Service Provider (ISP) and your network

Setting up your Router is a simple procedure, even if you are not familiar with networking. This guide will take you step by step through the things that you need to do to successfully share your Internet connection. There are a few pieces of information that you will need to obtain about your Cable or DSL provider as well as some network information. Most of the time, information is available on-line from your provider. You may have to call your provider.

Answer the following questions either by checking with your ISP's online technical support or by calling your ISP's technical support hotline. A worksheet has been provided in this manual to record your information for use later.

Is my IP address Static or Dynamic?

Your IP address is either Static or Dynamic. You will need to determine whether your provider assigns you a new IP address every time you log on (Dynamic) or they assign you an IP address that never changes (Static). For more about what an IP address is, see the Glossary of Networking Terms in the appendix of this manual.

Does my Internet service provider use PPPoE?

It either does or does not. If you have a DSL modem, your service provider may use PPPoE (for Point to Point Protocol over Ethernet) as the communication language between your DSL modem and the provider's network. PPPoE is a secure way of connecting your network to the Internet. Your Router supports PPPoE, so all you have to do is set it up to utilize PPPoE. This will be covered later in the manual. For more about PPPoE, see the Glossary of Networking term is the appendix of this manual.

Is my connection bound to a MAC address?

It either is or is not. All network cards or adapters have a unique "serial number", called a MAC address. Your service provider can "see" your network adapter's MAC address over the Internet. In some cases, the provider will record the MAC address of your adapter and only let that adapter connect to the Internet. This is done for several reasons, one of which is security. It also enables your provider to keep track of how many computers you have connected to your modem. You will need to find out whether your provider requires the same network card to connect to the modem all of the time. In the event that your provider does bind your MAC address, your Router has a feature that will copy the MAC address of your card. This will be covered later in the setup procedure. For more about what a MAC address is, see the Glossary of Networking Terms in the appendix of this manual.

Does my connection have an assigned host name?

It either does or does not. You will need to know if your provider assigns you host name that is required for connection. If it does, then you will need to know the host name. If your computer was assigned a host name by your provider, the next section describes how you can obtain your host name.

Setup Worksheet						
My IP Address is:	Static	Dynamic				
If your IP address is static, you	need the followin	g information:				
Static IP address: Assigned by your provider						
Subnet Mask: Assigned by your provider						
Gateway: Assigned by your provider						
My provider binds my connection to a MAC address	Yes	No				
My provider has assigned me a Host Name	Yes	No				
If Yes, My Host Name is:						
My provider uses PPPoE	Yes	No				
If your provider uses PPPoE, you	need the followi	ng information:				
User Name: Assigned by your ISP						
Password: Assigned by your ISP						
Service Name: Assigned by your ISP						

IMPORTANT:

IF YOU HAVE A CABLE OR DSL MODEM CONNECTED TO A PC AND ARE NOW ADDING THE ROUTER TO YOUR NETWORK, FOLLOW THESE STEPS TO OBTAIN INFORMATION YOU WILL NEED LATER. If you are not connecting the Router to an existing Cable or DSL modem, skip to the next section called "Connecting the Belkin 4-Port Cable/DSL Gateway Router".

- 1. Turn on your computer and connect to the Internet through your Cable or DSL Modem.
- 2. In Windows 95, 98, and Millennium Edition, Click "Start" then click on "Run".

- In the Run dialog box, type "winipcfg" then click "OK".
- 4. The IP Configuration window will appear.
- In the drop-down menu, select your current Ethernet adapter by clicking once on the downfacing arrow and highlighting your adapter's name by clicking once on it.
- The IP configuration window will appear. Click on "More Info".

P Configuration	
Host Information Host Name	
DNS Servers	172.16.4.75
Node Type	Mixed
NetBIOS Scope Id	
IP Routing Enabled	WINS Proxy Enabled
NetBIOS Resolution Uses DNS	V
Ethernet Adapter Information	
	Belkin F5D5010 CardBus Card / N
Adapter Address	00-10-B5-E4-63-22
IP Address	192.168.0.162
Subnet Mask	255.255.255.0
Default Gateway	192.168.0.1
DHCP Server	192.168.0.1
Primary WINS Server	
Secondary WINS Server	
	06 28 01 5:54:38 PM
Lease Ubtained	

7. This window will provide you with the Adapter Address (known as the MAC address), the IP Address, host name (if any), and other network settings. Carefully write this information in the table below, as you may need it later for setting up the Gateway Router. For further explanation of what these setting are, see the Glossary of Network Terms in the Appendix of this manual.

Write your IP Configuration settings here:				
Host name (If any):				
Adapter Address:				
IP Address:				
Subnet Mask:				
Default Gateway:				

STEP 2: Connect your computers to the Belkin 4-Port Cable/DSL Gateway Router (the Router)

In order for you to be able to connect your computers to the Router, each must be equipped with a network interface card (NIC) such as an internal PCI card (for desktop computers), a PC card (for laptop computers), or a USB Ethernet adapter (an alternative for USB-equipped computers only). Each computer connects to the Router via a network cable. You will need one network cable for each PC. The Belkin Gateway Router also connects to your Cable or DSL modem via a network cable. Be sure you have the proper parts before starting. NOTE: Some Cable or DSL modems connect to your computer using USB. Your Cable or DSL modem must have an Ethernet connector on it to connect the Belkin Gateway Router. If your modem does not have an Ethernet connection, you must use a Belkin Switch rather than the Router.

Basic Parts Required for Each Computer on Your List:

2 networking cables * for each computer, one for the Modem-to-Router connection; and one for the PC-to-Router connection.

1 each–Network Interface Card (NIC)—an internal PCI card for each PC and a PC card for each laptop

* We recommend top-quality Belkin CAT6 Networking Cables, part number A3L980-XX-S

Connect Your Equipment

Refer to the diagram below to aid in the connection process.

1. Power down your equipment.

Make sure that you have followed the steps to find your network configuration settings before you begin connecting your equipment. Be sure that the power to the Router, your modem, and all of your PCs has been turned OFF.

2. Connect a network cable between each of your PCs and the Gateway Router

Plug a Network cable into the Ethernet port on each of the other PCs and then to one of the ports on the rear of the Gateway Router labeled LAN.

- Note: It does not matter which LAN ports you connect your other PCs to, but be sure that you are not connecting any of the PCs to the port labeled WAN.
- 3. Connect a Network Cable between the Router and your Cable or DSL modem.

Plug a cable into the port labeled WAN on the Belkin Gateway Router and connect the other end of the cable to the Cable or DSL modem's Ethernet port.



- 4. Power on the Cable or DSL modem.
- 5. Connect the power adapter to the Router.
- 6. After the Cable or DSL modem and the Router are turned on, the Router's WAN link light should be on. This indicates that the modem and the Belkin Gateway Router are connected together.
- 7. Turn on the rest of your computers and let them boot up. After your computers boot up, the LAN link lights on the front of the Router should be on for each port that a computer is attached to. Verify that your computers are connected by checking these lights.

Connection of your Belkin 4-Port Cable/DSL Gateway Router is now is complete. The next step is to set up each of your computers to be able to communicate with your Router.

STEP 3: Setup your computers for networking

For each computer, you connect to the Router you must make the correct network settings. Belkin has simplified this process by providing you with the Belkin SOHO Networking software to configure your computers. Follow the steps below to install this software on your computers.

Installing the Belkin SOHO Networking Software

- Insert the CD-ROM that came with the Belkin 4-Port Cable/DSL Gateway Router into your CD-ROM drive of your computer connected to LAN Port-1.
- Double-click on "My Computer" then double-click on your CD-ROM drive. Double-click on the icon called "Install" in the CD-ROM window.
- Windows will install the software onto your PC. Follow the directions on the screen to complete the installation. After the Belkin SOHO Networking Software is installed, Windows may ask you to restart your computer. If so, please do so.
- 4. Repeat these steps for each computer you are connecting to your network.
- 5. Once you have installed the Belkin SOHO Networking Software on all of your computers, continue on to the next section.

Configuring Your Computers Using Belkin NetSetup

 Once your computer has restarted, click "Start", "Programs", "Belkin SOHO Networking" then "Belkin NetSetup" to launch this easy-to-use computer configurator.

The following screen will appear:

Belkin NetSetup
How does this computer fit into your network?
Belkin NetSetup a m setting up the first computer in my network 1 am adding this computer to my network
< Back Next > Cancel

2. Select "I am setting up the Belkin Gateway Router" and click "Next". The following screen will appear:

Belkin NetSetup	
	I use Static IP Addresses I use Dynamic IP Addresses If you are not sure, use this option
BELKIN	
belkin.com	

3. Select "I am setting up the first computer in my network" and click "Next". The following screen will appear:

Belkin NetSetup		X
We need some informaion abou	t your computer —	
Belkin	Computer Name:	Computer1
NerSetup		Each computer must have a different name.
	Workgroup:	My Network
		Each computer must have the same workgroup.
RELKIN	Description:	Windows98
belkin.com		This helps identify the computer and can say anything you wish.
	< Ba	ck Next > Cancel

- 4. In the "Computer Name" field type a name for the computer such as "Computer1". The name must be different for each computer on the network.
- 5. In the "Workgroup" field, type a workgroup name such as "My Network". The workgroup name must be the same for each computer on the network.
- 6. The description field is helps to identify the computer further. Type in a description such as "Windows 98". This description can be anything you want. It is not necessary for it to either match or be different from the description of any other computer on the network. You may also leave this field blank.

7. After entering the information in the three fields, click "Next". The following screen will appear:

Belkin NetSetup			×
Do you want to share your files? Belkin NetSetup E & KIN BELKIN BELKIN BELKIN	share files and	d printers on my cr iles and printers o	omputer n my computer
	< Back	Finish	Cancel

8. If you want to share files and printers on this computer, select "I want to share files and printers on my computer" and click "Finish". The following screen will appear:



- 9. NetSetup now needs to know if you want to create a client setup floppy disk. If you have more computers than you need to setup to work with the Router, click "Yes". This will save some files to the disk that your other computers can use to make setup easier. If you are not going to setup any more computers, click "No" and skip to step 11.
- If you clicked "Yes", you will be prompted to insert a floppy disk into the PC's floppy disk drive. Label a floppy disk "Belkin Networking" and insert it into the floppy disk drive. Click "OK".
- 11. After the client setup disk has been created, you will be prompted to restart your computer. Restart your computer.

Configuring Additional Computers Using Belkin NetSetup Software

Now that the first computer has been configured we are ready to configure the other PCs on your network.

 You should now be working with the next computer. Click Start, Programs, Belkin SOHO Networking, and then Belkin NetSetup to launch the easy-to-use computer configurator the following screen will appear:



2. Select "I am adding this computer to my network". Click Next.

3. Windows will now prompt you to insert the newly created client setup disk into the PC's floppy drive. Insert the disk you labeled "Belkin Networking" into the floppy drive and click OK. The following screen will appear:

Belkin NetSetup		×
We need some informaion about	ut your computer —	
Belkin NetSetup	Computer Name:	Computer 2 Each computer must have a different name.
	Workgroup:	My Network Each computer must have the same workgroup.
BELKIN belkin.com	Description:	Windows98 This helps identify the computer and can say anything you wish.
L	< Ba	ck Next > Cancel

- 4. In the "Computer Name" field type a name for the computer such as "Computer2". Remember, the name must be different from the other computers on the network.
- 5. The workgroup name should be filled in with the name you entered on the previous computer. Do not change this setting.
- 6. Type in a description such as "Windows 98". This can be anything you want and does not have to be different or the same as any other computer on the network. You may also leave this field blank.

7. When finished filling in the fields, click Next. The following screen will appear:

Belkin NetSetup			D	×
Do you want to share your files? Belkin NetSetup NetSetup NetSetup NetSetup NetSetup NetSetup NetSetup NetSetup	share files and vant to share f	d printers on my o iles and printers (computer on my computer	
	< Back	Finish	Cancel	

- If you want to share files and printers on this computer, select "I want to share files and printers on my computer" and click "Finish". If not, select "I do not want to share files and printers on my computer". Click "Finish".
- 9. The computer will now need to be restarted.
- 10. Your PC is now configured. Repeat these steps for the rest of the computers on your network.

Verify That Your Computers are Networked

Once you have set up all of your computers, you can check to see if they are all "networked" together.

- 1. Starting with any computer, Double-Click on "Network Neighborhood" on the desktop.
- 2. You should see an icon in the Network Neighborhood window with the name that you provided for your workgroup. Double-click this icon.
- 3. You should now see an icon for each computer you set up for the network. Please note, if the computers have just finished re-booting, it may take a few seconds for the computers to appear in the window.
- 4. If all of the computers appear in the window, then you have successfully networked your computers.

The last thing you need to do is set up the Belkin 4-Port Cable/DSL Gateway Router to work with the Internet. To learn how to do this, go the next step.

STEP 4: Configuring your Belkin 4-Port Cable/DSL Gateway Router (the Router)

Now that you have your computers "networked" together, you now can set up the Router to share the Internet connection. By now, you should have the information on your Internet Service Provider written on the worksheet at the beginning of this manual. Please have it handy as you go through this procedure.

Your Router is equipped with a setup utility that is 'web-based', which means that you will use your Internet browser to do the setup. To access the Belkin 4-Port Cable/DSL Gateway Router's setup utility, use your web browser (either Internet Explorer or Netscape Navigator).

Accessing the Web-Based Setup Utility

- Using the computer that was originally connected directly to the Cable/DSL modem, launch your browser. Note: You can access the setup utility from any computer on the network, however, use the original computer for this procedure at this time.
- 2. In the address bar, type the following address: 192.168.2.1.
- 3. The Router login screen will appear.

Enter Net	work Passwoi	rd	? ×
? >	Please type yo	ur user name and password.	
20	Site:	192.168.2.1	
	Realm	Web Manager	
	<u>U</u> ser Name		
	<u>P</u> assword		
	\Box Save this p	assword in your password list	
		OK Cance	<u>;</u>]

If this is the first time you are accessing the Belkin 4-Port Cable/DSL Gateway Router, enter "Admin" in the User Name field then click "OK".

4. The Router's initial setup will appear.

Configuring Your Router if Your Provider Uses Dynamic

IP Addressing (Skip to page 26 for static IP addressing and page 29 for PPPoE)

Follow this procedure if your ISP uses dynamic IP addressing.

1. Click on "Initial Setup". The following screen will appear:



2. Select "Dynamic IP Address" and click "Select" This will tell the Router that the ISP provides a dynamic IP address.

3. Click "MAC Cloning/Entry" on the left-hand side of the screen. The following screen will appear.



4. If your ISP assigned you a host name, enter the host name here. If not, leave this field blank.

If your ISP binds the connection to a MAC address, you will need the Router to copy that MAC address. If your ISP does bind your MAC address, or you are not sure, follow this step.

- Click "Clone MAC Address". This will clone (copy) the MAC address of the first PC connected to the Router. This will also ensure that the ISP, if it binds your connection to that MAC address, that it will remain active. Click "Enter" to save the settings
- 6. Your Router is now set up and you will be able to access the Internet from any PC on your network.
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Configuring Your Router if Your Provider Uses Static IP Addressing

If your ISP uses Static IP addressing, follow this procedure.

1. Click on "Initial Setup". The following screen will appear:

Select Connection Type - Min	crosoft Intern	et Explorer						_ 🗆 🗙
<u>File E</u> dit ⊻iew F <u>a</u> vorites	<u>⊺</u> ools <u>H</u> elp							11
Back Forward Stop	Refresh Ho	me Search Favorites	Iistory Mail	int	Edit -	Discuss		
Address 🖉 C:\WINDOWS\Deskto	p\Shared\gate	way setup1\SMCUI_0418\SM	CUI_0418\setup_wan	htm			▼ 🔗 Go	Links »
BELKIN belkin.com	Initial Your Be	Setup Ikin Gateway Router h	as the ability to) connec	t to vir	tually any	Broadband	
Static IP Settings PPPoE MAC Cloning/Entry DNS Address Entry	type an Internet	d information about y t Service Provider (ISF	e	type may	y requir	e that you	contact yo	ur
		Туре	Usage					
Security Firewall Security Log DMZ Virtual Server	c	Dynamic IP Address	Does your Internet Service Provider (ISP) use Dynamic IP addressing? If you are using a cable s modem and are not sure, try selecting Dynamic. If your connection does not work, your ISP may be using Static IP addressing.					
Special Application Ports LAN Client Restrictions Services	•	Static IP Address	Does your Internet Service Provider (ISP) use Static IP addressing? If your ISP uses Static IP addressing, you will need your IP address, SubNet Mask and Gateway Address. Your ISP may also give you a Host Name. Be sure to get this information when you contact your ISP.					ic g, ost
LAN Services NAT Enable/Disable Set Time Zone Change Password Remote Management Utilities	c	PPP over Ethernet	If you are usi PPPoE. If usir Password and Be sure to ge your ISP.	ng a DSL ng PPPoE I Service It this inf	_ moder , you w name formatic	n, your ISP vill need yo to set PPP on when yo	o may use ur User Nam oE properly. ou contact	ne,
Status Help			Selec	t				
(a)							의 My Computer	
) 2))@	y y _ Shipator	110

2. Select "Static IP Address" and click "Select". The following screen will appear:

	u	
Static IP Settings - Microsoft	Internet Explorer	
Elle Edit View Favorites		
Back Forward Stop	Befresh Home Search Favorites History Mail Print Edit Discuss	
Address 2 C:\WINDOWS\Deskto	p\Shared\gateway setup1\SMCUI_0418\SMCUI_0418\setup_wan_fix.htm	∂Go Links ≫
B E L K I N belkin.com		
Initial Setup	Static IP Settings The information below is given to you by your Internet Service Provider. Please enter the information and click "Enter"	
Static IP Settings PPPoE MAC Cloning/Entry DNS Address Entry	IP address assigned by your ISP	
Security	Subnet Mask	
Firewall Security Log	ISP Gateway Address	
DM2 Virtual Server Special Application Ports LAN Client Restrictions	Click ENTER to save settings and continue.	
Services		
LAN Services NAT Enable/Disable Set Time Zone Change Password Remote Management Utilities		
Status		
A Done		Dommuter

- 3. Enter your static IP address.
- 4. Enter your Subnet mask.
- 5. Enter the Gateway address.
- 6. Once you have filled in all of this information, click "Enter".
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7. Click "MAC Cloning/Entry" on the left-hand side of the screen. The following screen will appear.



8. If your ISP assigned you a host name, enter the host name here. If not, leave this field blank.

If your ISP binds the connection to a MAC address, you will need the Router to copy that MAC address. If your ISP does bind your MAC address, or you are not sure, follow this step.

- Click "Clone MAC Address". This will clone (copy) the MAC address of the first PC connected to the Router. This will also ensure that the ISP, if it binds your connection to that MAC address, that it will remain active. Click "Enter" to save the settings
- 10. Your Router is now set up and you will be able to access the Internet from any PC on your network.



Configuring Your Router if Your Provider Uses PPPoE.

If your ISP uses PPPoE, follow this procedure.

1. Click on "Initial Setup". The following screen will appear:

Select Connection Type - Mic	rosoft Intern	et Explorer								_ 🗆 ×
<u>File Edit ⊻iew Favorites I</u>	ools <u>H</u> elp	1								
→ → → → → → → → → → → → → → → → → → →	Refresh Ho	me Search Favorite	es History	Mail	Print	Edit	Discuss			
Address C:\WINDOWS\Desktop	o\Shared\gate	way setup1\SMCUI_0418	SMCUI_041	8\setup_wa	in.htm			•	∂Go	Links ×
BELKIN belkin.com										Î
Initial Setup	Your Be connect	Setup Ikin Gateway Route tion type. Select th d information abou	er has the ne type o t your co	ability f	to conne tion you	ect to v u have.	irtually any Knowing y	y Broad	lband nnectio	in
PPPoE	Internet	t Service Provider ((ISP).	111000101	i type in	oy roqu	ne that ye	a com		u
MAC Cloning/Entry DNS Address Entry	Select	Connection T	уре							
Coqueita		Туре	Usa	ge						
Firewall Security Log DMZ Virtual Server	c	Dynamic IP Addre	Doe Dyn ss moo you usin	s your Ir amic IP lem and r connec g Static	addressi are not tion doe IP addr	Service ng? If y sure, tr es not w essing.	Provider (i ou are usi y selecting vork, your	ISP) us ng a ca g Dyna ISP ma	se able mic. If ay be	
Special Application Ports LAN Client Restrictions Services	с	Static IP Address	Doe IP a you Gat Nam	s your Ir ddressin will nee eway Ad ie. Be su tact you	nternet : g? If yo d your II dress. Y ire to ge r ISP.	Service ur ISP u P addre: 'our ISP et this ir	Provider () ises Static ss, SubNet may also iformation	ISP) us IP ado Mask give yo when	se Stati dressing and ou a Ho you	ic g, ist
LAN Services NAT Enable/Disable Set Time Zone Change Password Remote Management Utilities	C	PPP over Etherne	If y PPP t Pas Be s you	ou are u oE. If us sword ar sure to g r ISP.	sing a D ing PPPo nd Servio et this i	SL mode DE, you ce name nformat	em, your Is will need y to set PP ion when y	SP may your Us PoE pr you co	/ use er Nam operly. ntact	e,
Status Help				Sele	ct					
2 Done								🛄 My C	Computer	

2. Select "PPPoE" and click "Select". The following screen will appear:

PPPoF - Microsoft Internet Fy	rolorer	
Eile Edit View Favorites	Cools Help	
Hack Forward Stop	C A C C C C C C C C C C C C C C C C C C	
Address 2 C:\WINDOWS\Deskto	p\Shared\gateway setup1\SMCUI_0418\SMCUI_0418\setup_wan_pppoe.htm	Go Unks "
BELKIN belkin.com		<u>*</u>
Initial Setup	PPoE The information below is given to you by your Internet Service Provider. Please enter the information and click "Enter"	
Static IP Settings PPPoE MAC Cloning/Entry DNS Address Entry	Use PPPoE Authentication	
Security	User Name	
Firewall Security Log DMZ Virtual Server Special Application Ports	Password Please retype your password Service Name Click ENTER to save settings and continue ENTER	
LAN Client Restrictions	CICK ENTER to save settings and continue.	
LAN Services NAT Enable/Disable Set Time Zone Change Password Remote Management Utilities		
Status		_
Help		-
@]	🛄 My Compt	iter //

- 3. Enter User Name.
- 4. Enter your password.
- 5. Confirm your password.
- 6. Enter your service name.
- 7. Once you have filled in all of this information, click "Enter".

If your ISP binds the connection to a MAC address, you will need the Router to copy that MAC address. If your ISP does bind your MAC address, or you are not sure, follow this step.

- Step 4
- 8. Click "MAC Cloning/Entry". The following screen will appear:



- Click "Clone MAC Address". This will clone (copy) the MAC address of the first PC connected to the Router. This will also ensure that the ISP, if it binds your connection to that MAC address, that it will remain active. Click "Enter" to save the settings.
- 10. Your Router is now set up and you will be able to access the Internet from any PC on your network.
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Intrusion Detection On/Off

To access this feature, click on "Firewall" on the left side of the screen. The Router can monitor any attempts to access your network and alert you when it happens. If you want this feature to work, select "Enable".

Security Log

To access this log, click on "Security Log" on the left side of the screen. The Router will record any unauthorized attempts that have been made to gain access to your network. This screen will let you view a log of these attempts.

DMZ Settings

To access this feature, click on "DMZ" on the left side of the screen. Demilitarized Zone (DMZ) is a feature that allows a computer to be exposed to the Internet by "placing" it outside of the firewall. This feature comes in handy when playing Internet games that don't work well with a firewall. Also, streaming video applications can benefit from bypassing the NAT firewall security. To place a computer in the DMZ, enter the IP address of the computer here. The Belkin Gateway Router supports one computer in the DMZ. Please note that when a computer is not protected by the firewall, it is open to hacker attacks. Use this feature only when needed.

Virtual Server Settings

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Initial Setup	Virtual Server Virtual server settings can be entered here. For detailed information, please see the Belkin Gateway Router user's	
Static IP Settings	manual.	
MAC Cloning/Entry DNS Address Entry	Private IP Private Port Type Public	Port
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LAN Client Restrictions	5. 192. 168. 2. CUDP	
Services	6. 192. 168. 2.	_
LAN Services NAT Enable/Disable Set Time Zone	7. 192. 168. 2. C TCP C UDP	
Change Password Remote Management	8. 192. 168. 2.	
Utilities	9. 192. 168. 2. © TCP C UDP	_
Status	10. 192. 168. 2.	
	Click ENTER to save settings and continue.	

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Special Application Settings

Click on "Special Application Ports".



Client Filter Settings

Click on "LAN Client Restrictions". The Belkin Gateway Router can be configured to restrict Internet access to computers at specific days and times.

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belkin.com	Client Filtering Settings			
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DNS Address Entry	192.168.2.			
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Services	C UDP C Block			
NAT Enable/Disable	4 192.168.2.	_		
Set Time Zone Change Password				
Remote Management				
	5 192.168.2.	-		
Status				
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	192,168,2.	_		
	Click ENTER to save settings and continue. (ENTER)			
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Services

LAN DHCP Settings

Click on "LAN Services" to access this screen. Your Belkin 4-Port Cable/DSL Gateway Router allows you to specify an internal IP address. You may also turn the DHCP service on and off. We recommend using DHCP service for the easiest setup of your network. Making changes to this screen will require you to re-configure your networked PCs.

NAT Enable/Disable

Network Address Translation (NAT) is used for security by making your internal network invisible to the Internet. We recommend that you leave NAT enabled for security reasons.

Set Time Zone

If you are using any of the time-based functions of the Router such as Client Filtering, you will need to set the time zone you reside in for the function to work properly.

Change Password

The Router ships without a set password. It is not necessary to enter a password. If you choose not to use a password, leave the space blank. If you do choose to enter a password, be sure to write it down in a safe place. To set a password, enter it into the "New Password" field and confirm it in the next field. To change your password, enter your existing password and then enter the new password twice.

Remote Management

Any computer on your network can access the Router's built-in setup utility. The Remote Management feature allows a computer outside of the network to access the setup utility. When enabled, only the computer at the specified IP address can access the setup utility. Entering 0.0.0.0 will allow access by any computer.

Utilities

Access the Utilities screen by clicking on "Utilities".



Reset

If the Router stops functioning properly, you can reset the Router. Your settings will not be lost when you click on the RESET button. You will be asked to confirm that you want to reset the Gateway Router. The power light will begin blinking and the port lights may blink. When the lights stop blinking, the Router has been reset.

Restore Defaults

To restore the factory default settings of the Router, click this link. All of your settings will change back to their initial state when the Router shipped. Please be sure this is what you want to do, before clicking the Restore Defaults link.

Update Firmware

Belkin is constantly working toward improving the overall functionality of the Router and will from time to time offer firmware updates. Firmware updates can be downloaded from the Belkin website. Click "Firmware Update" to check for the latest version of firmware.

Problem	Possible Cause/Solution
I cannot access the web-based Router setup utility when typing the correct address: 192.168.2.1	1. Accessing the Router setup utility can take up to 15 seconds. Be sure that you wait long enough.
	2. Check the connection between the PC and the Router making sure that the network cable is connected to any port labeled LAN.
	3. Check the LAN link light on the front of the Router. The light that corresponds to the port that the computer is connected to should be illuminated. If it is not, check your connection or network interface card.
	4. Open the IP configuration panel (described earlier in this manual). Select your adapter and press "Release". After the IP address has been released, click "Renew". Your computer should obtain an IP address from the Router.
	5. Reset the Router and begin again perform the above step again.

Problem	Possible Cause/Solution
The WAN link LED is not on or I cannot connect to the Cable or DSL modem.	 Check the connection between the Gateway Router and the Cable or DSL modem. Make sure the network cable from the Cable or DSL modem is connected to the port on the Router labeled WAN.
	 Make sure the Cable or DSL modem is powered and switched on.
	3. Make sure the Router has power. The Amber LED on the bottom of the front panel should be illuminated.
	 Some Cable or DSL modems require a crossover cable. Check with the manufacturer of your Cable/DSL modem for specifics about this.
My connection type is Static IP Address. I cannot connect to the Internet.	Since your connection type is Static IP Address, your ISP must assign you the IP Address, Subnet Mask, and Gateway address. Make sure that the Router's connection type is configured as "Static IP Address" and verify your settings.

Problem	Possible Cause/Solution
My connection type is Dynamic IP Address. I cannot connect to the Internet.	 Make sure your computers are correctly configured and all network cables are properly connected.
	 Make sure the cable or DSL line is properly attached on your Cable or DSL modem. Refer the manual of your modem to verify that it works normally.
	 Make sure the network cable between modem and the router is well connected. Power off the modem; wait a few seconds and then power it on again.
My connection type is PPPoE. I cannot connect to the Internet.	 Since your connection type is PPPoE, your ISP will assign you an account name and password and service name. Make sure the Router connection type is configured as PPPoE and fill these settings are entered properly.
	 Make sure your computers are correctly configured and all network cables are properly connected.

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Problem	Possible Cause/Solution	
My connection type is PPPoE. I cannot connect to the Internet.	3. Make sure the coaxial cable or DSL line is properly attached on your Cable or DSL modem. Refer the manual of your modem to verify it works normally.	
	 4. Make sure the network cable between modem and the Router is well connected. Power off the modem for a few seconds and power it on again. 	

Glossary of Terms

DHCP - Dynamic Host Configuration Protocol. This protocol automatically configures the TCP/IP settings of every computer on your home network.

DNS Server Address - DNS stands for Domain Name System, which allows Internet host computers to have a domain name (such as belkin.com) and one or more IP addresses (such as 192.34.45.8). A DNS server keeps a database of host computers and their respective domain names and IP addresses, so that when a domain name is requested (as in typing "belkin.com" into your Internet browser), the user is sent to the proper IP address. The DNS server address used by the computers on your home network is the location of the DNS server your ISP has assigned.

DSL Modem - DSL stands for Digital Subscriber Line. A DSL modem uses your existing phone lines to transmit data at high speeds.

Ethernet - A standard for computer networks. Ethernet networks are connected by special cables and switches, and move data around at up to 100 million bits per second or megabits per second (Mbps).

IP Address - IP stands for Internet Protocol. An IP address consists of a series of four numbers separated by periods, that identifies a single, unique Internet computer host. Example: 192.34.45.8.

ISP - Internet Service Provider. An ISP is a business that provides connectivity to the Internet for individuals and other businesses or organizations.

ISP Gateway Address - (see ISP for definition). The ISP Gateway Address is an IP address for the Internet router located at the ISP's office. This address is required only when using a cable or DSL modem.

LAN - Local Area Network. A LAN is a group of computers and devices connected together in a relatively small area (such as a house or an office). Your home network is considered a LAN.

Glossary of Terms

MAC Address - MAC stands for Media Access Control. A MAC address is the hardware address of a device connected to a network. A MAC address is unique (different) for every device.

NAT - Network Address Translation. This process allows all of the computers on your home network to use one IP address. Using the NAT capability of the Belkin 4-Port Cable/DSL Gateway Router, you can access the Internet from any computer on your home network without having to purchase more IP addresses from your ISP.

PPPoE - Point-to-Point Protocol over Ethernet. Point-to-Point Protocol is a method of secure data transmission originally created for dial-up connections; PPPoE is for Ethernet connections.

SPI - Stateful Packet Inspection. SPI is the type of corporate-grade Internet security provided by your Belkin 4-Port Cable/DSL Gateway Router. Using SPI, the gateway acts as a "firewall," protecting your network from computer hackers.

Subnet Mask - A subnet mask, which may be a part of the TCP/IP information provided by your ISP, is a set of four numbers configured like an IP address. It is used to create IP address numbers used only within a particular network (as opposed to valid IP address numbers recognized by the Internet, which must be assigned by InterNIC).

TCP/IP - Transmission Control Protocol/Internet Protocol. This is the standard protocol for data transmission over the Internet.

WAN - Wide Area Network. A network that connects computers located in geographically separate areas, (i.e., different buildings, cities, countries). The Internet is a wide area network.

Product Specifications

4-Port Cable/DSL Gateway Router

F5D5230-4

Network Standards:	IEEE 802.3, 802.3u
	10Base-T Ethernet (WAN), 100Base-T Ethernet (LAN)
	IEEE 802.3x Flow Control
	IEEE802.1p Priority Queue
	ANS/IEEE 802.3 NWay auto-negotiation
Protocol:	CSMA/CD, TCP, IP, UDP, PPPoE, AND DHCP (client and server)
VPN Supported:	PPTP, IPSec pass-through
Management:	Browser
Ports:	4 x 10/100Base-T Auto sensing RJ45 ports, and an auto uplink RJ45 port(s)
	1 x 10Base-T RJ45 port, WAN
LEDs:	Power, WAN Activity, LAN Link (10/100), LAN Activity
Firmware:	Flash upgradeable through Windows [®] 98, Me, NT [®] , 4.0, and 2000

Warranty, FCC, CE Statement

FCC Statement

DECLARATION OF CONFORMITY WITH FCC RULES FOR ELECTROMAGNETIC COMPATIBILITY

We, Belkin Components, of 501 West Walnut Street, Compton CA 90220, declare under our sole responsibility that the product: F5D5230-4

to which this declaration relates:

Complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CE Declaration of Conformity

We, Belkin Components, declare under our sole responsibility that the F5D5230-4, to which this declaration relates, is in conformity with EN55022, EN61000-3-2, EN61000-3-3 and EN55024.

Belkin Components Limited Lifetime Product Warranty

Belkin Components warrants this product against defects in materials and workmanship for its lifetime. If a defect is discovered, Belkin will, at its option, repair or replace the product at no charge provided it is returned during the warranty period, with transportation charges prepaid, to the authorized Belkin dealer from whom you purchased the product. Proof of purchase may be required.

This warranty does not apply if the product has been damaged by accident, abuse, misuse, or misapplication; if the product has been modified without the written permission of Belkin; or if any Belkin serial number has been removed or defaced.

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